Impact of microbial activity on the leaching of soluble N forms in soil: Online resource

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Table S1. Initial soil properties

Parameter	
Soil type (FAO classification*)	Dystric Cambisol*
Soil texture	Loam
Soil pH in water	5.24 ± 0.05
Soil total C (g kg^{-1} DM)	18.6 ± 0.02
Soil total N (g kg^{-1} DM)	3.04 ± 0.02
Soil ^{13}C (Atom% of total C)	1.08 ± 0.00
Soil ^{15}N (Atom% of total N)	0.37 ± 0.00
Soil respiration (µg C g^{-1} DM h^{-1})	0.50 ± 0.07
Soil water (g g^{-1})	0.20 ± 0.01
Soil solution free amino acids (µM N)	13.6 ± 1.63
Soil solution urea (µM N)	6.22 ± 0.20
Soil solution NO_3-N (mM N)	0.20 ± 0.15
Soil solution NH_4-N (µM N)	13.1 ± 1.31
Soil solution DOC (mM C)	2.63 ± 0.31
Soil solution DON (mM N)	0.14 ± 0.02

*as classified by Harrod and Hogan (2008), values are mean ± SEM (n = 3)

Laboratory analyses

Soil ^{15}N and ^{13}C, and total N and total C were determined on subsamples of the <2 mm fraction using a Carlo Erba NA 2000 linked to a Sercon 20/22 isotope ratio mass spectrometer (Sercon, Crewe, UK; Carlo Erba, CE Instruments, Wigan, UK). Soil respiration and gravimetric soil water content were measured on field-moist <2 mm sieved soil. Soil respiration was determined using an SR-1 automated multi-channel soil respirometer (PP Systems Ltd, Hitchin, UK). Soil solution N analyses included NO_3-N (Mulvaney 1996), NH_4-N (Miranda et al. 2001), free amino acids (FAA; Jones et al. 2002), dissolved organic carbon (DOC; as non-purgeable organic C) and total N (Multi N/C analyser, Analytic Jena Multi N/C 2100s, Jena, Germany). Dissolved organic N was determined via subtraction of the mineral N values from the total dissolved N values. Soil sterility after autoclaving was tested in triplicate by inoculating sterilised soils onto 90 mm petri dishes containing potato dextrose agar (PDA; Sigma) or Luria Bertani agar (LB; Lab M). Triplicate plates containing living soil were set up as a control. The plates were sealed and incubated at 21°C under a 16 h fluorescent light regime for 60

h, before examining for culturable organisms. No living organisms were observed in the sterile soil cultures. Nonetheless this method does not account for the presence of viable but non-culturable organisms (Kell et al. 1998).

References

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